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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Victor H. Segura				
Schlumberger Technology Corporation				
Sugar Land Product Center				
200 Gillingham Lane MD 200-9				
Sugar Land, TX 77478				
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		COY, NICOLE A		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,116	HEAD ET AL.	
	Examiner	Art Unit	
	Nicole Coy	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 26-31, 35 is/are rejected.
- 7) ☒ Claim(s) 12-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/28/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. The Applicant argued that the restriction requirement is defective. However, the arguments are moot because of the amendment canceling claims 32-34. Thus, the pending claims 1-31 and 35 are examined below.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claims 14, 15, 19, 23, 26, 28 are objected to because of the following informalities: the parenthetical phrases are improper and should be deleted.

Appropriate correction is required.

Claim 5 is objected to because of the following informalities: in line 1, the word "die" should read --the--; in line two the word "mall" should read --mill--.

Claim 23 is objected to because of the following informalities: in line 3 it is unclear what "ar.d7" means. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the drilling device comprises a tubing or whether the hybrid cable comprises a tubing.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Coenen et al. (USP 6,305,469).

With respect to claim 1, Coenen et al. discloses a method of drilling a borehole from a selected location in an existing wellbore penetrating a subterranean earth formation having at least one hydrocarbon bearing zone wherein the existing wellbore is provided with a casing and a hydrocarbon fluid production conduit (70) is arranged in the existing wellbore in sealing relationship with the wall of the casing, the method comprising: passing a remotely controlled electrically operated drilling device (3) from the surface through the hydrocarbon fluid production conduit to the selected location in the existing wellbore; operating the drilling device such that cutting surfaces on the drilling device drill the borehole from the selected location in the existing wellbore thereby generating drill cuttings wherein during operation of the drilling device (see

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column 5 lines 18-30), a first stream of produced fluid flows directly to the surface through the hydrocarbon fluid production conduit and a second stream of produced fluid is pumped over the cutting surfaces of the drilling device via a remotely controlled electrically operated downhole pumping means (14) and the drill cuttings are transported away from the drilling device entrained in the second stream of produced fluid (see column 5 lines 27-55).

With respect to claim 2, Coenen et al. disclose that the existing wellbore has an upper cased section (66) and a lower uncased section (see figure 2).

With respect to claim 3, Coenen et al. disclose that the cutting surfaces (13) of the drilling device are located on a drill bit or mill that is provided at or near the lower end of the drilling device and optionally on a drill bit or mill that is provided at or near the upper end of the drilling device.

With respect to claim 4, Coenen et al. disclose that the drill bit or mill is expandable (via extendable grippers 44) thereby allowing the borehole that is drilled from the selected location to be of a larger diameter than the inner diameter of the production conduit.

With respect to claim 5, Coenen et al. disclose that the drilling device is provided with an electrically operated steering means for the drill bit or mill (see column 4 line 38 to column 5 line 11).

With respect to claim 6, Coenen et al. disclose that the drilling device is provided with an electric motor (9) for actuating a means for driving the drill bit or mill.

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With respect to claim 7, Coenen et al. disclose that the drilling device is provided with the electrically operated pumping means (14).

With respect to claim 8, Coenen et al. disclose that the drilling device is provided with an electrically operated traction means (44).

With respect to claim 9, Coenen et al. disclose that the borehole that is drilled from the selected location is (a) a new section of wellbore (see column 2 lines 31-33); (b) a window in the casing of the existing wellbore or a window in the production conduit and casing of the existing wellbore (see column 2 lines 31-33); (c) a perforation tunnel in the casing and cement of the existing wellbore; or (d) an enlarged borehole through at least a section of the existing wellbore having mineral scale deposited on the wall thereof.

With respect to claim 10, Coenen et al. disclose that the drilling device is suspended from a cable (50) that encases at least one wire and/or segmented conductor for transmitting electricity or electrical signals.

With respect to claim 11, Coenen et al. disclose that the drilling device is suspended from the cable via a releasable connection means (51).

8. Claim 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Quigley et al. (USP 5,921,285).

With respect to claim 35, Quigley et al. disclose a hybrid cable for use with a drilling device comprising a tubing (12) comprising a wall and an interior passageway and having at least one electrical conductor wire (62) and/or segmented electrical

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conductor embedded in the wall, and wherein the interior passageway of the tubing is in fluid communication with a fluid passage in the drilling device (wherein the interior passage is capable of communicating with a drilling device; see figures 10A –10C).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coenen et al. in view of Quigley et al.

With respect to claim 26, Coenen et al. does not disclose the electrical conductor wire embedded in the wall of tubing. Quigley et al. discloses embedding the wire in the tubing in order to ensure that the bending strains on the wire are minimized. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Coenen et al. by embedding the electrical conductor in a tubing wall as taught by Quigley et al. in order to ensure that the bending strains on the wire are minimized.

With respect to claim 27, Coenen et al. does not disclose an outer fluid barrier and flexible protective sheath. Quigley teaches a fluid barrier and protective sheath in figure 11 in order to protect the wire and inner tubing. It would have been obvious to modify the embodiments of figure 10 in Quigley with the protective tubing and fluid barrier taught in figure 11 in order to protect the wire and inner tubing.

With respect to claim 28, Coenen et al. in view of Quigley et al. disclose drilling a new wellbore section wherein either (a) the second stream of produced fluid is passed to the drilling device through the annulus formed between the hybrid cable and the wall of the new wellbore section and the entrained cuttings stream is transported away from the drilling device through the inner metal tube of the hybrid cable; or (b) the second stream of produced fluid is passed to the drilling device through the inner metal tube of the hybrid cable and the entrained cuttings stream is transported away from the drilling device through the annulus formed between the hybrid cable and the wall of the new section of wellbore (see column 5 lines 27-55).

With respect to claim 29, Coenen in view of Quigley disclose that sensors (56) are provided along the outside of the hybrid cable for transmitting formation data to the surface via the electrical wire(s) and/or segmented electrical conductor(s).

11. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coenen et al. in view of Bailey (USP 6,454,007).

With respect to claim 30, while Coenen discloses drilling a lateral borehole, Coenen does not disclose a whipstock. Bailey discloses using a whipstock in order to guide a drill to form a lateral borehole. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Coenen et al. by using a whipstock as taught by Bailey in order to guide the drill to form a lateral borehole.

With respect to claim 31, Bailey teaches that the whipstock is passed to the selected location suspended from the first drilling device (see figure 2).

Allowable Subject Matter

12. Claims 12-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 7:30-5:00, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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William Nouder
Primary Examiner